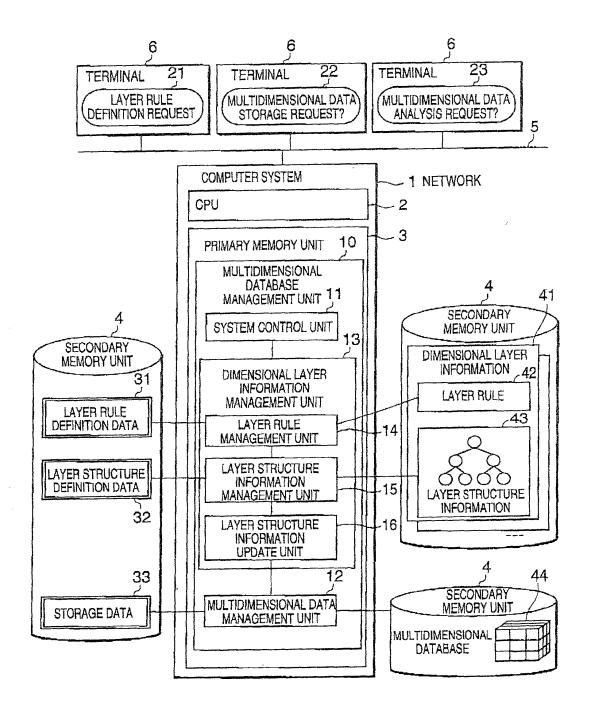
FIG.1



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FIG.2

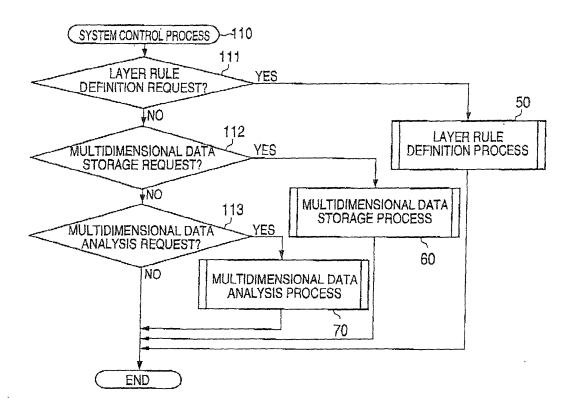


FIG.3

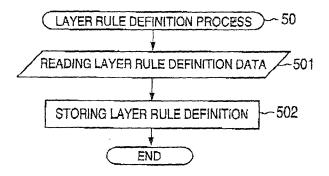


FIG.4

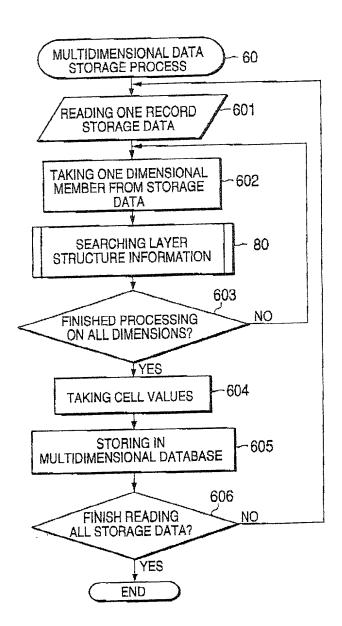


FIG.5

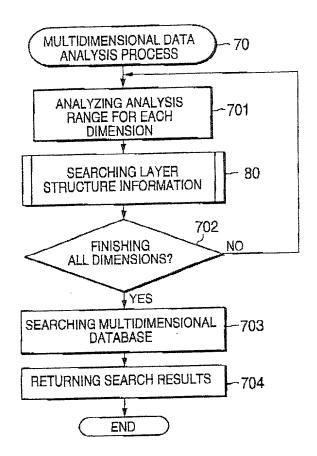


FIG.6

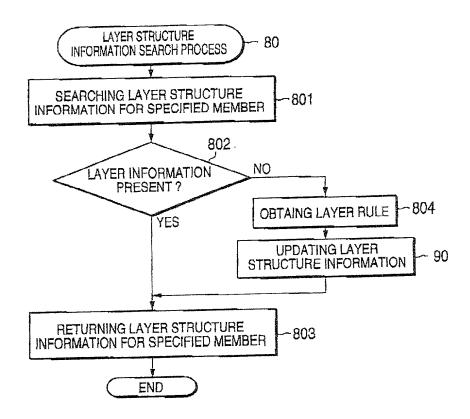
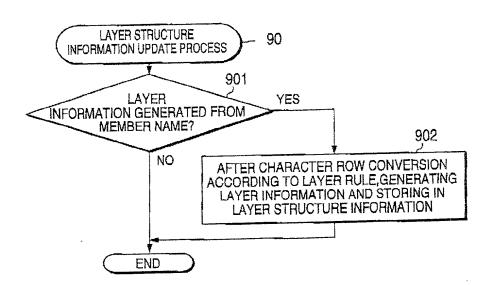


FIG.7



3110

TIME DIMENSIONAL LAYER RULE DEFINITION DATA

#LAYER RULE:

#AFTER CHARACTER ROW CONVERSION ON MEMBER, OBTAINING LAYER INFORMATION

FROM MEMBER NAME

LEVEL10=\$ MEMBER NAME

LEVEL11={

S/Y(.... ¥)0[123]/¥1Q1/

S/Y(.... ¥)0[456]/¥1Q2/

S/Y(.... ¥)0[789]/¥1Q3/

S/Y(.... ¥)1[012]/¥1Q4/

]

LEVEL12={

S/¥(.... ¥)../¥1/
]

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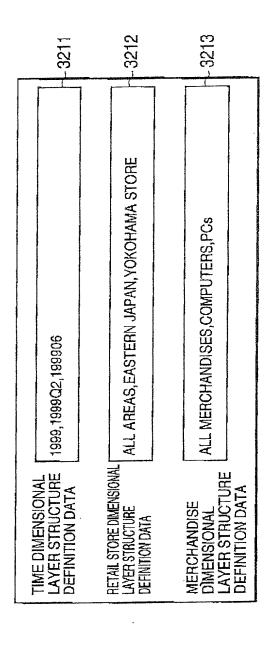
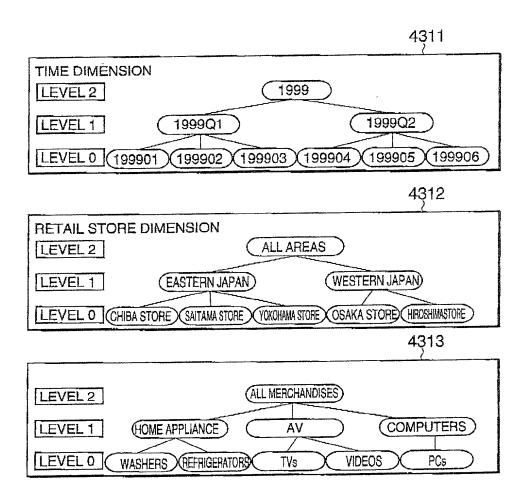


FIG.10



RETAIL STORE DIMENSIONAL LAYER RULE DEFINITION DATA

3120

**#LAYER RULE:** 

#OBTAINING LAYER INFORMATION FROM CSV FORMATTED FILE

FROM FILE, CSV FILE

LEVEL0=COLUMN 3

LEVEL1=COLUMN 2

LEVEL2=COLUMN 1

### FIG.12

3126

ALL AREAS, EASTERN JAPAN, CHIBA STORE

ALL AREAS, EASTERN JAPAN, SAITAMA STORE

ALL AREAS, EASTERN JAPAN, YOKOHAMA STORE

ALL AREAS, WESTERN JAPAN, OSAKA STORE

ALL AREAS, WESTERN JAPAN, HIROSHIMA STORE

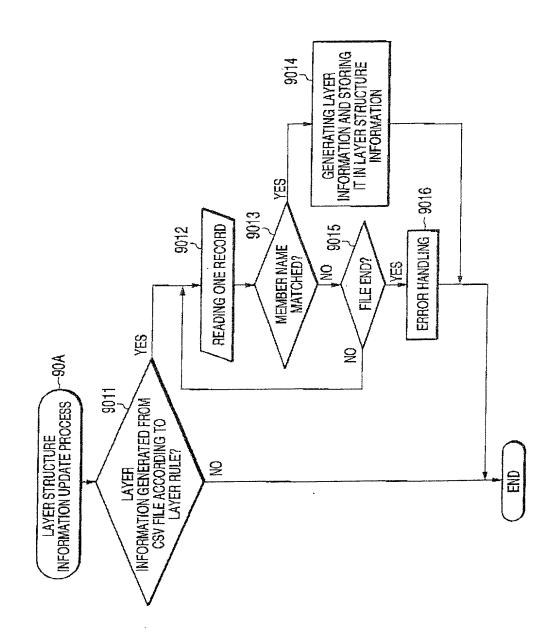
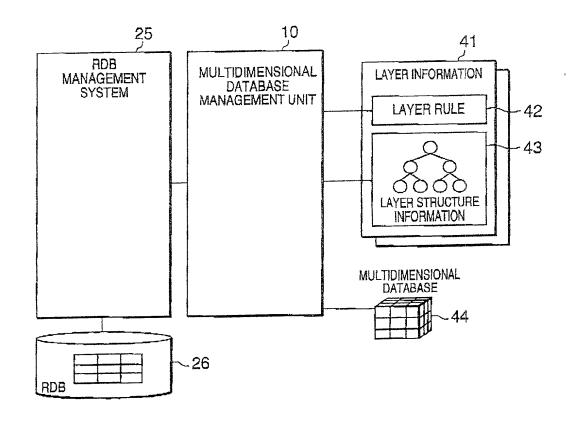


FIG.14



3130

MERCHANDISE DIMENSIONAL LAYER RULE DEFINITION DATA

#LAYER RULE : RDB PRODUCT MASTER LIST

**#OBTAINING FROM COL1, COL2** 

FROM RDB PRODUCT MASTER LIST

LEVEL 0=SMALL CLASSIFICATION

LEVEL 1=LARGE CLASSIFICATION

LEVEL 2="ALL MERCHANDISE"

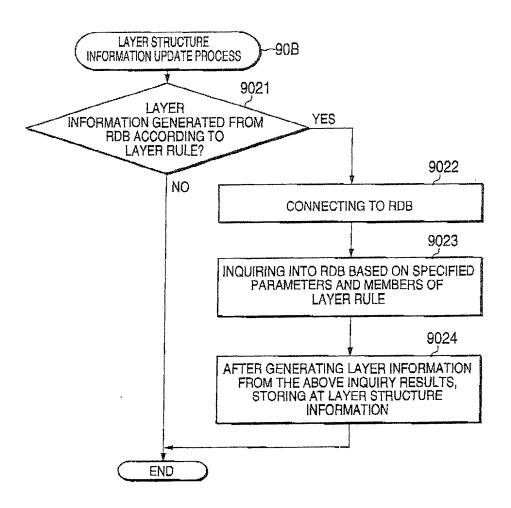
### **FIG.16**

### CONTENT OF RDB PRODUCT MASTER TABLE

| LARGE CLASSIFICATION                                      | SMALL CLASSIFICATION                 |
|---|--------------------------------------|
| HOME APPLIANCE<br>HOME APPLIANCE<br>AV<br>AV<br>COMPUTERS | WASHERS REFRIGERATORS TVs VIDEOS PCs |

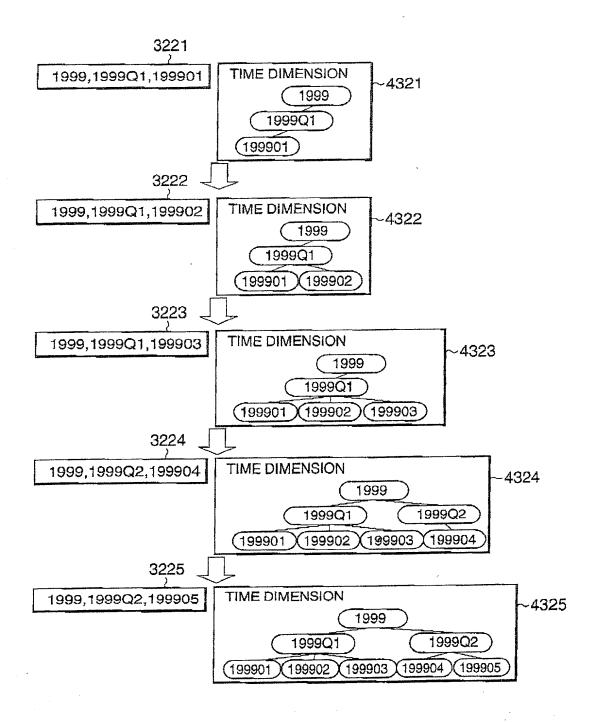
261

FIG.17

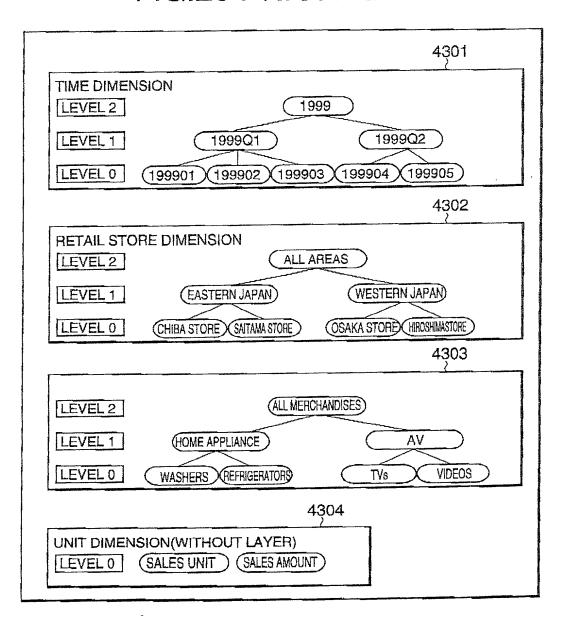


4310 TIME DIMENSION (WITHOUT LAYER STRUCTURE INFORMATION) 4302 RETAIL STORE DIMENSION ALL AREAS LEVEL 2 LEVEL 1 (WESTERN JAPAN) (EASTERN JAPAN) LEVEL 0 OSAKA STORE) (HIROSHIMASTORE) (CHIBA STORE) (SAITAMA STORE) 4303 (ALL MERCHANDISES) LEVEL 2 LEVEL 1 (HOME APPLIANCE A۷ WASHERS (REFRIGERATORS) LEVEL 0 **VIDEOS** TVs 4304 UNIT DIMENSION(WITHOUT LAYER) (SALES UNIT) (SALES AMOUNT) LEVEL 0

FIG.19



### FIG.20 PRIOR ART



### FIG.21 PRIOR ART

3201 TIME DIMENSIONAL 1999,1999Q1,199901 LAYER STRUCTURE 1999,1999Q1,199902 **DEFINITION DATA** 1999,1999Q1,199903 1999,1999Q2,199904 1999,1999Q2,199905 3202 RETAIL STORE ALL AREAS, EASTERN JAPAN, CHIBA STORE DIMENSIONAL ALL AREAS, EASTERN JAPAN, SAITAMA STORE LAYER STRUCTURE ALL AREAS, WESTERN JAPAN, OSAKA STORE **DEFINITION DATA** ALL AREAS, WESTERN JAPAN, HIROSHIMA STORE 3203 **MERCHANDISE** ALL MERCHANDISES, HOME APPLIANCE, WASHERS DIMENSIONAL ALL MERCHANDISES, HOME APPLIANCE, REFRIGERATORS LAYER STRUCTURE ALL MERCHANDISES, AV, TVs **DEFINITION DATA** ALL MERCHANDISES, AV, VIDEOS 3204 UNIT DIMENSION SALES UNIT LAYER STRUCTURE SALES AMOUNT **DEFINITION DATA** 

III

activation in the second

# FIG.22 PRIOR ART

|   | 3301          |
|---|---------------|
| 199901, SAITAMA STORE, TVs,             | 22, 2420000   |
| 199901, OSAKA STORE, REFRIGERATORS      | , 15, 1350000 |
| 199902, HIROSHIMA STORE, VIDEOS,        | 42, 2940000   |
| 199902, SAITAMA STORE, WASHERS,         | 21, 1680000   |
| 199903, CHIBA STORE, VIDEOS,            | 33, 2310000   |
| 199904, HIROSHIMA STORE, REFRIGERATORS, | 18, 1620000   |
| 199905, CHIBA STORE, TVs,               | 45, 4950000   |
|   |               |

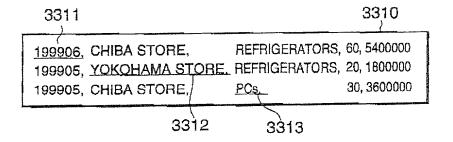
11 M

11

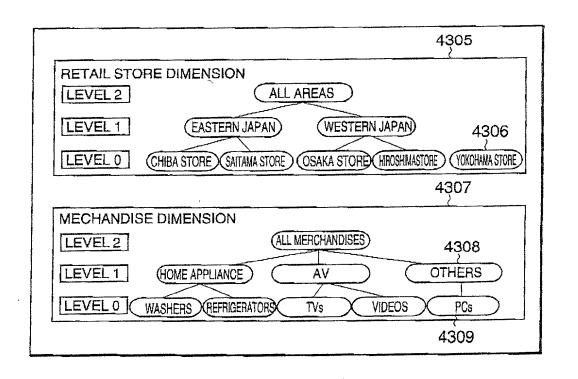
# FIG.23 PRIOR ART

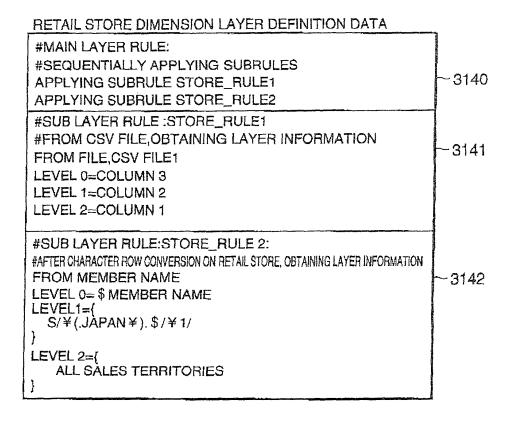
| 띯               | MERCHANDISE DIMENSION | TVS          |         |          |         |         |  |          |
|-----------------|-----------------------|--------------|---------|----------|---------|---------|--|----------|
| JNIT DIMENSION  | Z                     | SALES AMOUNT | SUNT    |          |         |         |  |          |
| IME DIMENSION   |                       |              |         |          |         |         | Andreas de la companya de la company |          |
|                 |                       |              |         |          |         |         |  | 1999     |
| RETAIL STORE!   |                       |              |         | 1999901  |         |         | 100000   |          |
| 1               | 199901                | 199902       | 199903  | f        | 199904  | 199905  | 770000   |          |
|                 | 1100000               | 330000       | 770000  | 2200000  | 1100000 | 660000  | 176000   | SOCOOD   |
| SATAIN STORE    | 000066                | 990000       | 900099  | 2640000  | 660000  | 000000  | 1850000  |          |
| EASTERN JAPAN   | 2090000               | 1320000      | 1430000 | 4840000  | 1760000 | 165000  | 244000   | 4530000  |
| OSAKA STORE     | 1100000               | 1100000      | 1100000 | 330000   | 11000   | 000000  | 140000   | 0200000  |
| HIROSHIMA STORE | 330000                | 550000       | 1100000 | 1980000  | 110000  | 86000   | 1780000  | 4400000  |
| MESTERN JAPAN   | 1430000               | 1650000      | 2200000 | 5280000  | 1210000 | 165000  | 288000   | 8140000  |
|                 | 3520000               | 2970000      | 3630000 | 10120000 | 2970000 | 3300000 | 6270000  | 16390000 |
|                 |                       |              |         |          |         |         | 222  |          |

### FIG.24 PRIOR ART



### FIG.25 PRIOR ART





### **FIG.27**

199901, EASTERN JAPAN SAPPORO STORE, TVS,17, 1870000
199902, HIROSHIMA STORE, VIDEOS, 42, 2940000
199903, EASTERN JAPAN SAPPORO STORE, REFRIGERATOR,15,1350000

**FIG.28** 

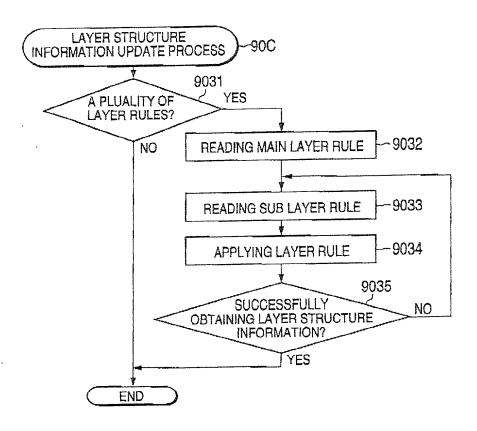


FIG.29

